

### Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

1-29. (canceled)

30.(previously presented) A substantially purified or isolated nucleic acid encoding a malate dehydrogenase (MDH) polypeptide from a clover (*Trifolium*) species, wherein said nucleic acid is from white clover (*Trifolium repens*).

31-32.(canceled)

33.(previously presented) A substantially purified or isolated nucleic acid comprising a nucleotide sequence selected from the group consisting of

- (a) SEQ ID NOS 205, 218, 252, 271, 276, 288, 293, 297, 302, 306, and 308;
- (b) full\_length complements of the sequences recited in (a);
- (c) full length sequences antisense to the sequences recited in (a) or (b);
- (d) functionally active variants having at least approximately 95% identity to an entire sequence recited in (a), wherein said functionally active variant encodes a polypeptide having malate dehydrogenase activity in a plant;
- (e) functionally active variants having at least 95% identity to an entire sequence recited in (b) or (c), wherein said variant modifies the expression of a polynucleotide of (a); and
- (f) RNA sequences corresponding to an entire sequence recited in (a), (b), (c), (d), or (e).

34. (canceled)

35. (previously presented) A construct including a nucleic acid comprising a nucleotide sequence selected from the group consisting of

- (a) a sequence encoding a malate dehydrogenase (MDH) polypeptide selected from the group consisting of SEQ ID NOS 205, 218, 252, 271, 276, 288, 293, 297, 302, 306, and 308;

- (b) full length complements of the sequences recited in (a);
- (c) full length sequences antisense to the sequences recited in (a) or (b);
- (d) functionally active variants having at least approximately 95% identity to an entire sequence recited in (a), wherein said functionally active variant encodes a polypeptide having malate dehydrogenase activity in a plant;
- (e) functionally active variants having at least 95% identity to an entire sequence recited in (b) or (c), wherein said variant modifies the expression of a polynucleotide of (a); and
- (f) RNA sequences corresponding to an entire sequence recited in (a), (b), (c), (d), or (e).

36-39. (canceled)

40.(previously presented) The construct according to claim 35 wherein the nucleic acid operably linked to one or more regulatory elements, such that the nucleic acid is expressed.

41.(previously presented) The construct according to Claim 40, wherein the one or more regulatory elements include a promoter and a terminator, said promoter, nucleic acid and terminator being operably linked.

42.(previously presented) A plant cell, plant, plant seed or other plant part, including the construct according to claim 35.

43.(canceled)

44.(previously presented) A method of modifying one or more plant functions selected from the group consisting of organic acid synthesis; organic acid secretion; nutrient acquisition; aluminium and acid soil tolerance; and nitrogen fixation and nodule function; in a plant, said method including introducing into said plant an effective amount of a nucleic acid according to claim 30.

45.(previously presented) The method according to claim 44 wherein said nucleic acid comprises a sequence selected from the group consisting of SEQ ID NOS 205, 218, 252, 271, 276, 288, 293, 297, 302, 306, and 308.

46-48.(canceled)

49.(currently amended) ~~The~~ method according to claim 44 wherein the method is modifying nutrient acquisition and the nutrient is phosphorous.

50.(previously presented) A substantially purified or isolated nucleic acid wherein the nucleic acid is a single nucleotide polymorphism (SNP) from a nucleic acid according to claim 30.

51-57.(canceled)

58.(currently amended) The construct according to claim 35, wherein the nucleic acid comprises a sequence selected from the group consisting of ~~the nucleic acid sequence of~~ SEQ ID NOS 205, 218, 252, 271, 276, 288, 293, 297, 302, 306, and 308.

59. (previously presented) A plant cell, plant, plant seed or other plant part, comprising the construct including a nucleic acid according to claim 58.

60. (previously presented) The nucleic acid according to claim 33, comprising Seq. ID No. 271.

61. (previously presented) The construct according to claim 35, comprising Seq. ID No. 271.

62. (previously presented) The construct according to claim 40, comprising Seq. ID No. 271.

63. (previously presented) A plant cell comprising the construct according to claim 62.

64. (previously presented) The construct of claim 35, further comprising one or more nucleic acids selected from the group consisting of:

(a) nucleic acids encoding citrate synthase (CS) polypeptide; and

(b) nucleic acids encoding a phosphoenolpyruvate carboxylase (PEPC) polypeptide or a PEPC-like polypeptide,

wherein the nucleic acids are from a clover (*Trifolium*), medic (*Medicago*), ryegrass (*Lolium*) or fescue (*Festuca*) species.

65. (canceled)

66. (currently amended) The construct according to claim 64, wherein the construct comprises a nucleic acid encoding an MDH polypeptide selected from the group consisting of the sequences shown in SEQ ID NOS 205, 218, 252, 271, 276, 288, 293, 297, 302, 306, and 308.

67. (previously presented) The construct according to claim 64, wherein the construct comprises a nucleic acid encoding a PEPC polypeptide.

68. (previously presented) The construct according to claim 67, wherein the construct comprises a nucleic acid encoding an MDH or MDH-like polypeptide selected from the group consisting of SEQ ID NOS 205, 218, 252, 271, 276, 288, 293, 297, 302, 306, and 308.

69. (previously presented) The construct according to claim 67, wherein the construct comprises a nucleic acid encoding a CS polypeptide.

70. (previously presented) The construct according to claim 69, wherein the construct comprises a nucleic acid encoding an MDH polypeptide selected from the group consisting of SEQ ID NOS 205, 218, 252, 271, 276, 288, 293, 297, 302, 306, and 308.

71. (previously presented) A plant cell, plant, plant seed or other plant part, comprising the construct in accordance with claim 64.